ARCHIVING OBSERVATIONS: INDIVIDUAL AND CORPORATE EFFORTS

(Status Report: IAU Working Group for Spectroscopic Data Archives)

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Abstract. A status report concerning the activity of the IAU working group for Spectroscopic Data Archives is presented.

Key words: databases - spectroscopy: archives

This Working Group focuses its attention on preserving observed spectra, both future and existing. When the need for such a collaboration was proposed to the IAU and accepted five years ago, very few ground-based observatories had policies of archiving their digital observations in the long term. Most only held them for a few months as a safeguard until the observer in question had safely read the files of data onto a home computer, and only the space missions – driven by a set of quite different philosophies - were operating schemes to save and sort the various files generated by observing sessions. During its relatively brief existence, the Working Group has witnessed a number of positive changes, in which rather frozen attitudes (that observations are the business of the observer, not the observatory) have thawed into the much more receptive ones (that observatories need to address these matters, even though the sources of manpower and software may not yet be identified), even extending to gratitude that the IAU has taken up this initiative.

Acting in this advisory capacity at grass roots level, the Working Group has been encouraged by, and sometimes party to, significant decisions and actions that augur well for the future. It has been 288 E. Griffin

instrumental in bringing about the first on-line archive of reduced ground based spectra (at Haute-Provence Observatory, France), and has championed other efforts to create archives of observations. Another part of its brief was to devise a means for safeguarding the "closed" collections of photographic spectra that are dispersed in many holdings around the world, and the Working Group achieved an agreement between the IAU and Haute-Provence Observatory to create there a World Plate Store; the plan is to transfer all spectra to that site along with relevant index catalogs (preferably already digitized) and log books for collation into a world research resource. In addition, the Working Group has campaigned vigorously to preserve and continue the long tradition of sky patrol activities and associated plate archives at the Sonneberg Observatory in Germany, and I am pleased to report that Sonneberg has now been re-opened and its 70-year duration sky-surveys resumed.

The history of this subject notes the *corporate* responsibility in the past for archives of photographic observations, when the plate files of an observatory were rigorously maintained and guarded quite jealously by its employees. The replacement of photographic by digital modes of spectroscopic observing has not, unfortunately, been accompanied by parallel archiving responsibilities, and it has proved hard to instigate appropriate replacements when habits have set in, and the younger generation has been brought up differently.

Certain of the difficulties which the Working Group has encountered have enabled it to fathom the attitudes causing them and to identify some of the most persuasive arguments likely to correct them. The designation of resources for result-oriented research rather than for service-oriented activities is due to differences in policy that need to be respected, while the increasing indispensability of archiving capabilities as a research tool needs to be promoted. As long as the archival element of an astronomical project allows itself to be regarded as the weakest and most easily disposed-of element, disposed-of it will be, as soon as a budget cut is announced. With the enormous computing capabilities as we have today and with the increasing potential, desire and need to exploit digital data more thoroughly, the activities of data-handling and re-use are beginning to be recognized in their true role as the essential mortar that binds together the building bricks.

However, virtually all telescopes are now yielding observations in digital form, and the multi-object programs that are now commencing are threatening to inundate their users with far more data that can possibly be handled at all completely if those same users want to do scientific research as well as handle data. The astronomical community clearly has a strong need for the expertise, guidance, advice and co-operation that the present company is well able to offer, but the onus may have to be on this company to take steps to ensure that the benefits of close co-operation between data-provider and data-handler are mutually reciprocated. At the same time, much of the effort going into data-handling projects is still individual enterprise. More *corporate* action is needed – to adapt, share and extend those efforts, and to ensure that the archiving activities themselves have a future.